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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,653	11/21/2006	Mubarik Mahmood Chowdhry	283560US0PCT	7554
22850 7590 09/17/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER SALVITTI, MICHAEL A				
ART UNIT 1796		PAPER NUMBER		
NOTIFICATION DATE 09/17/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/566,653

Applicant(s)

CHOWDHRY ET AL.

Examiner

MICHAEL A. SALVITTI

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/309)
- Paper No(s)/Mail Date 04/27/2008
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The translated Foreign Priority Document filed July 17th, 2009 is sufficient to perfect priority, thereby overcoming the rejection of claims 1-18 based upon *Bauers et al.* and *Chowdhry et al.* as set forth in the non-final rejection mailed on May 15th, 2009.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

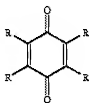
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 4-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 7,417,098.

Although the conflicting claims are not identical, they are not patentably distinct from each other.

Regarding claims 1 and 18: '098 recites a process for the preparation of an aqueous polymer dispersion comprising reacting at least one olefin in the presence of a polymerization catalyst in aqueous medium, wherein the catalyst comprises a metal from Group 7-10 and a phosphine, and the ligand may be of the structure:



wherein the R may be one or more halogens (claim 1 of '098).

The '098 reference claims neither ligands 2,6-dichloro-parabenzquinone nor 2,3,6-trichloro-para-benzoquinone, specifically. However, '098 is an overarching genus to the species claimed in the instant application. The specification of '098 teaches 2,3,5,6- tetrachloro-para-benzoquinone as the preferred ligand (Example, col. 18), and cites 2,3,6-trichloro-para-benzoquinone as a possible ligand from a list of 23 ligand species (col. 9, lines 45-50). At the time of the invention, it would have been obvious to a person having ordinary skill in the art to experiment with the chlorine substitution pattern of the ligands with the motivation of optimizing the yield (compare Example to Comparative Example, which show different yields with different ligands). The named derivatives (2,6-dichloro-parabenzquinone and 2,3,6-trichloro-para-benzoquinone) are at once envisaged from the ligand description.

Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970). MPEP §804.

Regarding claims 4 and 6: '098 recites polymerization in the presence of ethylene ('098 claim 7).

Regarding claim 5: '098 recites propylene, 1-butene, 1-hexene, 1-octene and styrene ('098 claim 6).

Regarding claim 7: '098 recites the "G" equivalent as C₁-C₁₂ alkylene ('098 claim 1).

Regarding claims 8-10: '098 recites the genus of both Ia and Ib compounds and mixtures thereof ('098 claim 1).

Regarding claim 11: '098 recites triphenyl phosphine ('098 claim 1).

Regarding claim 12: '098 recites the genus of tetramethylene diamine ('098 claim 1).

Regarding claim 13: '098 claim 1 recites the genus of Ni(COD)₂, and the Example (col. 18) uses Ni(COD)₂.

Regarding claim 14: '098 recites the genus of Ni(CH₃)₂(TMEDA) ('098 claim 1).

Regarding claim 15-17: '098 teaches polymerization of polyethylene (see Example, col. 18) using a method analogous to that claimed, albeit with a different catalyst. '098 is silent regarding the branching of the product. However, the mere recognition of latent properties in the prior art does not render nonobvious an otherwise

known invention. *In re Wiseman*, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979). See MPEP § 2145.

Claims 1-14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of copending Application No. 10/521,117. Although the conflicting claims are not identical, they are not patentably distinct from each other:

Regarding claim 1: '117 teaches a process for the preparation of aqueous polymer dispersion by reacting olefins in the presence of a polymerization catalyst, the catalyst containing a Group 7-10 metal, phosphine and ligands of the structure:



wherein R can be a halogen radical ('117 claim 14). At the time of the invention, it would have been obvious to a person having ordinary skill in the art to optimize the invention by introducing different substitution patterns into the ligand, with the motivation of activating ethylene ('117 ¶ [0113]).

Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970). MPEP §804.

Regarding claim 2: '117 recites aqueous miniemulsion polymerization ('117 claim 15).

Regarding claim 3: '117 recites an ionic emulsifier, a genus of the claimed species ('117, claim 18).

Regarding claim 4: '117 recites ethylene ('117 claim 19).

Regarding claim 5: '117 recites propylene, 1-butene, 1-hexene and styrene ('117 claim 20).

Regarding claim 6: '117 recites exclusively ethylene ('117 claim 21).

Regarding claim 7: '117 recites the G equivalent as C₁-C₁₂ alkylene (claim 14).

Regarding claims 8-10: '117 recites the genus of the ligands, and states that mixtures can be used ('117 claim 1).

Regarding claim 11: '117 recites the genus of the catalyst (claim 14).

Regarding claim 12 and 14: '117 recites the genus of tetramethylene diamine (claims 14 and 17) and further teaches Ni(CH₃)₂(TMEDA) as a preferred material (¶ [0102]).

Regarding claim 13: '117 recites the genus of tetramethylene diamine (claims 14 and 17) and further teaches Ni(COD)₂ as a preferred material (¶ [0102]).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 1-18 are allowed over the prior art upon resolution of the double patenting rejections. The following is an examiner's statement of reasons for allowance:

The Certified Translation of DE 10335990.7 perfects the foreign priority of the instant application and antedates the closest prior art of record to *Bauers et al.* The current application is a species of the genus claimed by U.S. Patent No. 7,417,098; Patent '098 gives no indication that the 2,3,6-trichloro-1,4-para-benzoquinone and 2,6-dichloro-1,4-para-benzoquinone ligated nickel phosphines lead to unexpected results with regards to higher solids content of the polymerized monomer, as shown by the Examples vs. Comparative Examples in the present application.

The prior art of record does not teach or suggest an emulsion polymerization process wherein the combination of 2,6-dichloro-1,4-para-benzoquinone or 2,3,6-trichloro-1,4-para-benzoquinone ligands in combination with Group 7-10 transition metal phosphine catalysts are capable of polymerizing olefins in aqueous media. A person having ordinary skill in the art at the time of the invention would not expect the combination of elements listed above to increase the polymerization yield of olefins.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

IDS

The incorrectly dated IDS appearing on the Office Action Summary (Form 326), dated 11/28/2008 was acknowledged in a previous telephone correspondence. For the

record, the correct date of the IDS should be April 27th, 2006, not July 18th 2007. The correct date is reflected in the current 326 Form.

Response to Arguments

Applicant's arguments, see "Remarks", filed 07/17/2009, with respect to the rejection(s) of claim(s) 1-18 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 7,417,098 to Chowdhry and Co-Pending Application 10/521,117.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent No. 7,378,474 to Fukui teaches aqueous polymerization of olefins with similar catalysts, but does not overcome the perfected priority date.
- US 2008/0182915 is referenced as being commonly owned and as being directed towards the product of the instant invention. This invention is not prior art, but is made of record.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. SALVITTI whose telephone number is (571)270-7341. The examiner can normally be reached on Monday-Thursday 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/M. A. S./
Examiner, Art Unit 1796